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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,323	03/12/2001	Horst Belau	GR 98 P 2544 P	1014

7590

07/10/2002

LERNER AND GREENBERG, P.A.
PATENT ATTORNEYS AND ATTORNEYS AT LAW
Post Office Box 2480
Hollywood, FL 33022-2480

EXAMINER

CUNEO, KAMAND

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 07/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

91804323

Applicant(s)

Examiner

Cuneo

Group Art Unit

2827

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 5/2/02.
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-7 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-6 is/are rejected.
- ☒ Claim(s) 7 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The ~~proposed~~ drawing ~~correction~~, filed on 5/2/02 is ☒ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been ☒ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

DETAILED ACTION

Treatment of Claims Based on Prior Art

1. 35 USC 103(a) states:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Obviousness under 35 USC 103(a) is determined against a background established by the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), which are summarized in items 1-4 below.

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. This application currently names joint inventors. In considering patentability of the claims under 35 USC 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 USC 103(c) and potential 35 USC 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-6 are rejected under 35 USC 103(a) as being unpatentable over Gentry (US

4644092), Osifchin et al. (US 3093805, hereafter Osifchin) and Kobayashi et al. (US 6040524, hereafter Kobayashi).

Claims 1, 4: Gentry discloses board (22) in figure 5 with conductor tracks (16), attached to pins (26) at the edge of the board and shield (14) on surface (24). Gentry discloses the claimed invention except for disclosing that the conductor tracks are alternated with ground tracks and are connected thereto with capacitors.

Osifchin and Kobayashi disclose conductor tracks (14) and (112a,b,c) alternating with ground tracks (14) and (114), see the cover figures. Furthermore, it is well known to attach ground and conductor tracks with a capacitor to reduce parasitic capacitance in the signal.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to alternate the conductor tracks of Gentry with ground tracks, as taught by Osifchin and Kobayashi, and to attach capacitors between the two tracks, for reduction of noise in the signal carried by the conductor tracks, because these practices for reduction of noise are old and well known in the art.

Claims 2-3: Please note that the ground tracks are connected to the shield layer with through holes.

Claims 5-6: The shield covers the tracks from side-to-side and the outer tracks are ground tracks.

Allowable Subject Matter

4. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening

claims. The prior art does not fairly suggest the second outer layer with all of the conductor, ground and pin features.

Response to Arguments

5. Applicant's arguments with respect to the priority data are persuasive, but a copy of the foreign priority document is still required.

Applicant's arguments with respect to the prior art have been carefully reviewed, but are not persuasive.

Applicant argues that Gentry does not teach the claimed invention because the side-by-side configuration of the signal and ground tracks should be on one board and because the ground shield covering the surface of the tracks is not on a neighboring board. The rejection was made under Gentry in view of Osigchin and Kobayashi, because Gentry does not disclose the alternating conductor and ground tracks. Both Osifchin and Kobayashi disclose such a configuration of conductors on a board as claimed, and there is ample motivation to combine these teachings with those of Gentry to render obvious the claimed invention. Furthermore, the claims recite that the shield be "disposed on an adjacent one of said layers and covering the side-to-side configuration." The layers are merely specified as "at least two layers, each one of said at two layers having an edge region." The board of Gentry has several layers, for example layer (14) on which the shield is formed or any of the internal layers of (22). The shield is disposed on any and all of these layers. Further, the shield covers the conductor and ground tracks as clearly seen from the figure. The claims neither recite that the shield is not located on the board (22) where the conductors are formed, nor do they state that there are no exposed portions of the tracks. Therefore, applicant is arguing limitations

which are not recited in the claims. Additionally, the claim states that the shield is located on an adjacent layer. Nevertheless, it does not specify which one of the at two layers is this adjacent layer. As the layers are all located in close proximity, any one of the layers can be an adjacent layer.

On page 9 of the response applicant states that the subject matter of the application pertains to circuit board sand not flexible substrates. Such a distinction is meaningless because flexible substrates are a part of circuit boards. Circuit boards can be made by both rigid and flexible substrates.

Applicant states that when aggregated, the instant invention is significantly different than the prior art. Examiner notes that the scope of the instant claims is so broad as to encompass the prior art.

Applicant lastly argues that Osifchin and Kobayashi do not disclose various features of the present invention. As these references are relied upon for certain teachings taken in conjunction with Gentry, these arguments are not persuasive.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Closing

7. Any inquiries related to the examination of this application should be directed to Ex. K. Cuneo at (703) 308-1233 or her supervisor SPE D. Talbott at (703) 305-9883. Inquiries of a general nature should be directed to the receptionist of Group 2800 at (703) 308-0956. The fax numbers for Group 2800 are (703) 308-7722 and 7724.

A handwritten signature in black ink, appearing to read 'K. Cuneo', with a stylized, cursive script.

K. Cuneo
Primary Examiner
July 5, 2002